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The
Florida Entomologist

Official Organ of the Florida Entomological Society

VOL. XXIV JANUARY, 1942 NO. 4

Some Honorary Members and Officers at the Annual Banquet of the Florida Entomological Society, 1941.

Left to right—First row: Dr. P. H. Rolfs, Dr. Herbert Osborn, Dr. E. W. Berger, W. W. Yothers; *Standing*: W. L. Thompson, Dr. Creighton, Dr. A. N. Tissot, G. B. Merrill, Dr. J. W. Wilson, C. B. Wisecup, Pres. Homer Hixson, J. R. Watson, Dr. Ralph Miller, K. E. Bragdon, President elect. (Photo by L. S. Maxwell.)

A NEW STEPHANOTHRIPS FROM TEXAS

Stephanothrips whitcombi n. sp.

J. R. WATSON

Female apterous—Length about 1.14 mm. Color of abdomen, thorax, and legs grayish brown, liberally supplied with red and yellow hypodermal pigment, fore legs a little darker; head and antennal segment IV dark brown; all but the apex of abdominal segment X, grayish yellow; apical quarter clouded with black. Antennal segments I-III, bright yellow.

Head but little longer than wide, widest at base; cheeks nearly straight but diverging slightly posteriorly. Lateral and dorsal surfaces carry strong

tubercles, as in *occidentalis*. Some near the posterior border carry short spines. Vertex rounded and so produced as to completely hide the first antennal segment; the margin carrying a single pair of colorless curved bristles slightly expanded at the tip as in *occidentalis*. These bristles are only about .03 mm. long, less than half as long as the third antennal segment. At the situation where the other two pair of bristles occur in *occidentalis* there are only tubercles slightly longer than those on the cheeks. Eyes small. Post-ocular bristles and ocelli lacking. Antennae considerably shorter than the head, four-segmented (only three visible in dorsal view); segment II abruptly narrowed to a broad, obliquely set pedicel; segment III oblong oval, abruptly narrowed to a narrow pedicel which is widened into a sharp expansion suggesting the ring in the corresponding segment of species of *Frankliniella* of the *tritici* group; segment IV lanceolate with a very broad pedicel. Mouth cone short, reaching but little over half way across the prosternum. Prothorax half as long as the head, and (including coxae) well over twice as wide as long. Legs short and stout. Abdominal segments as in *occidentalis*. Segment IX about three times as long as segment VIII. Tube about as long as the head and twice as long as segment IX, slightly narrowed in the middle and wider at the apex than at the base. Terminal bristles two-fifths as long as the body.

MEASUREMENTS OF TYPE:

Length 1.14 mm., Head, length, .19 mm., greatest width, .18 mm., prothorax, length, .095 mm., width, including coxae, .25 mm., pterothorax, greatest width, .24 mm., abdomen, greatest width, .24 mm., IX segment, length, .14 mm., width at base, .09 mm., at apex, .04 mm., tube, length, .21 mm., terminal bristles, .43 mm.

Antennal segments:	II	III	IV	
Length	40	80	60	
Width	30	30	20	microns

Described from two specimens collected by W. H. Whitcomb from Spanish moss at College Station, Texas.

The diagnosis of the genus Stephanothrips Trybom (Hood., Bull. Brooklyn Ent. Soc. XXIV, P. 317, Dec. 1929) will have to be modified to include this species. The antennae has only four segments. But this condition is plainly due to the suture between segments IV and V being completely obliterated. There are but two prominent bristles on the vertex of the head and they do not arise from conspicuous tubercles. There are short traces of the other two pairs of bristles. In the reduction of these bristles this species shows an approach to *Trachythrips* Hood. The color too is very close to *Trachythrips watsoni* Hood and at a glance this insect might readily be mistaken for that species.

The

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J. R. WATSON, Gainesville.....Editor
E. W. BERGER, Gainesville.....*Associate Editor*
J. W. WILSON, Belle Glade.....*Business Manager*

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PRESIDENTIAL ADDRESS

Delivered at the Annual Meeting, December 5, 1941
Florida Entomological Society

HOMER HIXSON

I appreciate the honor and I am truly grateful for the confidence you have placed in me by electing me to this office; nevertheless, it should be fully appreciated that our secretary, Dr. A. N. Tissot and treasurer, Dr. J. W. Wilson, with whom you have been associated year after year, are the dynamic figures in this society who know and promote its functions and to whom I acknowledge due credit.

Even though I have done little that could be considered a credit to the position which I now hold in the society, it is no criterion of my opinion of the progress that can and should be made in entomology as a profession; a problem that should receive our most serious consideration. The repossession and control of its services and responsibilities are the factors upon which the future of this profession depends. Although entomological services may not be as great in the public mind at the present time, as those of some of the other professions, there are definite services to be rendered that should be demanded of this profession, if for no other reason, because those services can be rendered more effectively and efficiently by men trained in this field.

We take pride and rightfully in our scientific attitude, but we fail to completely employ our inherent place in the service of

mankind to control and thereby increase the possibilities and efficiency of our work. In this field all participants are accepted regardless of background or creed with as gracious a hospitality as occurs among learned men. Some of the other professions are highly exclusive and even esoteric and to become affiliated an individual must go through an extended period of formal study and even adopt and uphold certain professional ethics. This is far from the case in entomology and I cherish the fact. Never theless there should be certain limitations for we cannot establish any standard on which to build otherwise. No matter how important our work is in the improvement of agriculture, the prevention of disease, or in increasing the comforts of man, under the present trend, a truly great profession, like other professions that should hold equal rank with the best, will eventually be dominated by the aggressive professions unless we seek and direct the outlet of entomological services and develop and maintain high rank and recognition in independent service.

The entomological profession has grown in size and influence until it should now be able to achieve and establish its own standards. It has grown primarily because of the magnitude of the field and its service in finding a means of handling problems of an entomological nature and it has gained in recognition by allowing that information to filter out to be used by anyone who found it useful. Advantage has been taken of this altruistic attitude and now whether competent or not and without consideration of professional standards or progress, entomological information is used for personal gain, to build industrial interests, promote the prestige of other professions and even to enhance the facilities for scientific research in other fields on funds appropriated on the strength of problems of a true entomological nature. Such a situation is not an imaginative picture; it is not uncommon to find evidence of it in the current literature and one does not have to read between the lines to find that the statements which I have made, do not exaggerate the case. For instance, in a recent issue of *Science* the following item was printed: "More than a million dollars—$1,192,000 to be exact—will be spent during the coming twelve months on anti-mosquito defense in and around the fifty-three major military areas where U. S. troops are quartered, according to the Journal of the American Medical Association. A little over a third of this sum will be used by the medical department, the remainder by the quarter-master department. The work will be

done by civilian specialists and laborers, under the direction of eighty-seven sanitary engineers, all of them mosquito eradication experts." It is useless to expand further on this phase since this clearly exemplifies many of the points we have just considered.

I do not come before you with the idea that our present status can be improved at a moment's notice nor do I mean to imply that any particular individual or even an organization, such as this, will be able to counterbalance the propaganda working against our cause or that the proper professional balance may be attained within any definite period of time, but I do wish to emphasize that it is only by coordinated and persistent effort that the proper relationships with the other professions will be gained and maintained; hence, every individual entomologist should begin to think and work in that direction, not aggressively but energetically and with honorable motives.

In my opinion, the weakest place in our professional set-up is due to the fact that we have comparatively few trained entomologists in independent service. Individuals with entomological training have seldom voluntarily gone into pest control work; consequently, this field of service, for the most part, is in the hands of men without entomological training. This may be due to one of several factors, but in many states including Florida, there are no laws to adequately protect patrons from unethical pest control practices; consequently, to enter independent service, an individual must work under the handicap of a suspicious public until a reputation for dependable service has been acquired before a good standard of living can be realized from this type of work. Therefore, it should be our professional duty to promote and develop standards in one way or another that will make this field enticing to those who would make it their life's work. Unfortunately, most entomologists are under government regulations and for the most part, feel that they are hand-tied in so far as the promotion of professional interests are concerned. I am inclined to think that we should take a more conscientious attitude in this connection because a great part of this handicap is the work of other factions who find it to their interest to promote this feeling.

These are not the only ways in which entomology has been placed in a critical light. We are frequently unjustly criticized because we often become too enthusiastic in solving problems

that loom up suddenly, and forget that frank diplomacy is one of the best assets of any profession in public service. There is, however, that tendency for a division or department when the opportunity permits, to underestimate the value of conservativeness and develop beyond the normal balance with closely related fields. This inevitably results in a setback for the offender, is usually a reflection on the profession and certainly obstructs good cooperation. In the ecological balance in nature, we see this law at work, but we do not always heed its lesson and look forward to manage our progress carefully and buffer our growth.

In this world of commercialism, a study of the professions that have held their ground professionally reveals that they have utilized their research efforts by application through men in independent service. Therefore, I firmly believe that the best opportunity for this profession and the individual seeking a role in this field at the present time, even though the initial struggle is great, is in the promotion of the business of pest control on a professional basis. From the professional point of view, such a role of individual entomologists would bring many problems to focus and build public confidence in our ability to handle entomological problems; as a result, we would gradually acquire the responsibility of solving all entomological problems and develop a basis from which to plan and form a well balanced profession capable of protecting and promoting its interests in research and in public service.

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ENTOMOLOGICAL SERVICES OF THE STATE DEPARTMENT OF AGRICULTURE *

NATHAN MAYO, Commissioner

Mr. Chairman and Gentlemen of the Society:

I take it that all of you fully realize that I am not coming to you as a scientist. My part of your program will be to explain briefly the relation of the Department of Agriculture, not only to your Society but to the work of insect control.

The Florida Legislature of 1937 enacted an Insecticide and Fungicide Law, enforceable by the Commissioner of Agriculture and the State Chemist. This Act controls the registration, labeling, sale, sampling, and analysis of insecticides and fungicides used for agricultural purposes.

Up to that time very little, if any, control over insecticides was exercised except through the manufacturers themselves. As a result, producers of fruit and vegetables in this State were left to their own judgment and the tender mercies of insecticide dealers when it came to knowing the true quality of their spray and dusting materials. We may be certain that under these unhappy circumstances, a goodly number of our growers were never sure whether they were feeding the bugs or giving them a dose of poison. Perhaps some of them in their struggle against insects may have even yielded to the alluring advertisements that used to appear, offering complete riddance from crop eating insects. Personally, I recall one incident where a good old farmer, whose Irish potatoes were being ruined by bugs, responded to an advertisement and sent a dollar for a "sure remedy." In a few days he received by mail a package containing two wooden blocks with these directions:

> First, catch your "tater" bug; second, lay him on Block No. 1; third, press down on him with Block No. 2 until sure he is dead; fourth, proceed in like manner until all the dern bugs are dead.

It might be well to give in brief outline the main features of our Florida Law on Insecticides.

Section 1 of the Act makes it unlawful to sell an agricultural insecticide or fungicide if:

(a) The label bears any false or misleading statement, design, or device regarding the article or the ingredients therein.

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* Address given before the Florida Entomological Society, Gainesville, Florida, December 5, 1941.

(b) If it is labeled or printed so as to deceive or mislead the purchaser.

(c) If the strength or purity of the product is below the guaranteed analysis appearing on the label.

Section 2 of the Law requires that each package of insecticide shall bear a printed label showing the name of the product, the net weight or volume content, the name and address of the manufacturer, the minimum and maximum percentages of arsenic, and the name and percentage of each ingredient making up the product.

If any insecticide contains a substance which might leave a residue that might be harmful to health, our Florida Law requires that the label must show the guaranteed content of such substance. The Act provides a penalty of $50.00 upon conviction of violation for the first time of Sections 1 and 2. Second and subsequent offenses are punishable by a fine of not more than $200.00.

Section 3 of the Florida Law requires manufacturers to obtain each year a license and to register with the Commissioner of Agriculture each brand of insecticide or fungicide which is to be sold within the State. The License Fee for manufacturers is $125.00 per year, and the Registration Fee is $2.50 per year for each brand registered.

Section 4 of the Act sets forth the duties of the State Chemist in regard to making laboratory tests of samples to be drawn by inspectors from the Bureau of Inspection of the Department of Agriculture. All official samples are required to be drawn in the method and manner prescribed by the Act and by regulations promulgated by the State Chemist.

The Act also provides that the purchaser of agricultural insecticides in Florida may request the State Chemist or Commissioner to take, or have taken, samples of such products, which shall be analyzed by the State Chemist upon payment of such fees as he shall deem necessary.

Section 7 of our Insecticide Law provides for settlement between manufacturer and buyer in cases where a deficiency in the goods is reported by the State Chemist. Two options are provided for such a settlement. First, the buyer may keep all or any part of the product and pay for same on the basis of a reduced price to be agreed upon. Second, the buyer may refuse

to accept or may return to the seller all, or any part, of the product. If a part of the product has been used by the buyer before settlement, no payment shall be made to the seller, and the seller furthermore shall refund to the buyer any moneys already paid for that part of the product already used. Such settlements, however, are applicable only where minor deficiencies are found by the State Chemist. Minor deficiencies are defined as being those where the sample is found to be less than 3% of the amount of one or more of the active ingredients. Major deficiencies are defined by the Act as being those cases where the State Chemist reports a deficiency in excess of 5% of the guaranteed contents of the active ingredients. Cases involving a major deficiency are punishable by a fine not to exceed $50.00 for first offenses and not to exceed $200.00 for any subsequent offense.

Section 8 of the law empowers the Commissioner of Agriculture to issue a Stop Sale Notice on any agricultural insecticide which is misbranded, not branded, or which is irregular in any way, and this Stop Sale Notice remains in effect until such lot of insecticide shall be brought within the requirements of the Law.

Entomologists do not have to be told how enormous an undertaking it is to try to control insect pests, but you may be interested in what the Department of Agriculture, through its inspection service, is contributing toward that vast struggle. The function of the Department is that of an inspector, regulator—policeman, if you wish. These duties are prescribed by law. We believe it is wise to leave to you gentlemen who have made the study of plant pests your life's work the question as to the best materials and their proper use.

In compliance with the provisions of the Florida Law, we have this year licensed sixty-nine companies to manufacture insecticides, thirty-one of them being Florida concerns, and accepted 800 registrations for their various brands. Last year, of the samples taken, thirty-five were found to be sufficiently below the guaranteed analysis to be illegal. This is not a large percentage since there were 750 brands registered, but there were a greater number that were below the guaranteed analysis and still not low enough to be declared deficient.

The service which the Department renders is that of seeing that the purchaser gets those effective materials that you have recommended and that the seller has agreed to furnish him.

It is necessary at this point to make our attitude clear. We are not hunting some excuse to seize or stopsale insecticides. Our purpose is to determine whether or not the law is being complied with. We want this law that has been laid down for us to operate according to the letter and the spirit. We want to be right.

It seems that the materials having insecticidal and fungicidal value are numberless, nor is the search for new materials ever complete. It probably is safe to say that new materials or combinations of materials are discovered daily, and these materials are offered for use in Florida sooner or later. This makes it necessary that the Department be forever devising new methods of analyzing these materials—forever on the alert to determine whether or not the new material has a well substantiated basis for the claims made for it. In this matter we are placed in an unenviable position. We earnestly want to assist all honest efforts to control insect pests, but we equally as earnestly try not to let materials of little value gain prestige by being accepted for registration.

I trust you will not feel that I am going too far as the enforcing agent of the Florida Insecticide Law if I should request the members of your organization, as men of science, to help the State Chemist and myself in several ways which I will suggest:

First, through a careful study of our State Law. This legislation is the first of its kind that we have had. It is not perfect. There may be flaws in it that should be removed. It possibly needs enlargement through the addition of provisions that will make its enforcement more effective.

Second, through research and experimental work that will help develop insecticides more definitely suited to Florida agriculture, thus making available to the grower knowledge that will help him to choose more wisely and economically.

Third, by giving us information that will make it possible to control illegal products and products of questionable quality. With 800 different brands of insecticides being sold in Florida, it is a large task to promptly detect those which are not in compliance with the Law.

Competent authorities estimate that growers in Florida will spend during the year 1941 more than three million dollars for

insecticides and fungicides. With the large increase in production which will probably be necessary to meet war conditions, Florida farmers may be expected to spend four or even five million dollars per year in 1942 and 1943 to protect their crops against insects and plant diseases. If you gentlemen will lend your talents to the task of promoting fact-finding and truth-telling about these vital needs of our farmers, you will be doing a real service to the cause of Florida agriculture. To express it in different words, those of us who must provide food to meet the needs of our nation and of our civilization in its struggle for self-preservation, should join hands with the common purpose of keeping our house in order through enforcement of laws that protect growers against those who would, for the sake of "filthy lucre," sell products of little value by fraud and deception.

SOME FLORIDA LEPIDOPTERA RECORDS

J. R. WATSON

Some random observations have been made, largely during the past year, of unusual abundance or scarcity of some species of Lepidoptera. Some of these fluctuations were quite marked. These may aid in indicating the broods of these species, concerning which little has been published. A few notes made in previous seasons have been incorporated. The records apply to Alachua County chiefly.

Papilio philenor L., the Pipe-vine Swallowtail became common in early May. On May 22nd it was the most abundant of the larger butterflies. After mid-June its numbers decreased. It again became abundant in late August and early September. It disappeared in late November. It is usually our most abundant *Papilio* and the last to disappear.

P. cresphontes Cramer, the Giant Swallowtail first became common the first of June. As always, its larva, the Orange Dog, was most troublesome on young citrus during August and September.

P. turnus appeared in February. This brood had entirely disappeared by the end of April. They were again common in September and October. The dark female form (*glaucus*) appeared in August.

P. marcellus Cramer (*P. ajax*), the Zebra Swallowtail flies on warm days all winter as well as summer. It became abundant by the last week in March and increased again in early May. It was scarce in August and early September.

Zerene caesonia (Stoll.), the Southern Dogface, was the most abundant of all the butterflies (except probably *Euptychia sosybia*) during the first week in May, 1940. In 1941 it became abundant the last of April and by the middle of May was easily the most abundant butterfly (the spring of 1941 was later than that of 1940 in most of the biota. The lubberly locust was two weeks later in hatching). On June 3, it composed seventy-five per cent of the butterfly fauna. In late August and early September none were seen. On September 11th the first of the fall brood was seen and by the first week in October they were abundant and remained common throughout the month. They disappeared in late November. In Grossbeck's list * there are no records for August or early September.

Eurema lisa (B. and L.), the Little Sulphur, is one of our most abundant butterflies during most of the year. None were seen in early September but by the last week of the month they were abundant. Their numbers began to diminish in early October, but a few were still flying in mid-December. Grossbeck (under *E. euterpe*) has no records from June to August except "St. Augustine common throughout the year (Johnson)".

E. jucunda (B. and L.) the Fairy Yellow, appeared in early September, and was again common in mid-October. Grossbeck cites records for May in Avon Park and Lakeland. All others are in September and October.

Danaus plexippus L., the Monarch is scarce during the summer, but is noticeable in November, probably migrants from the North. On December 4th, it was the fourth butterfly in abundance. It is usually seen in small numbers during warm days all winter.

Danaus berenice (Cramer), the Queen, was first seen on May 2nd, but did not become common until mid October. Grossbeck cites no records for June-September except "St. Augustine common in summer (Johnson)".

(To be continued)

* Insects of Florida, Lepidoptera by John A. Grossbeck. Bull. A.M.N.H. XXXVII.—(Edited by Frank E. Watson, who added numerous notes.)

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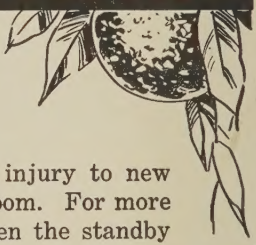

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